ABSTRACT OF THE DISCLOSURE

There is provided an interpolation method for the Volume-of-Fluid (VOF) applied to a two-phase incompressible fluid, in particular, which makes it possible to cause time evolution of a shape-describing function based on the Volume-of-Fluid (VOF) method while preserving a sharpness of a shape described by the function. The method defines a function F on a one-dimensional structured grid formed on a one-dimensional real region, the function being defined through definition of a value thereof at a center of each cell within the one-dimensional structured grid, as an interpolation function H. With respect to a cell of interest on the one-dimensional structured grid, a slope is set to zero if a forward difference and a backward difference of the function f have different signs, and to a value twice as large as a smaller one of absolute values of the forward difference and the backward difference if the forward difference and the backward difference have the same sign. The function F on a partial region of the one-dimensional real region determined by the cell of interest is defined by a linear function having a value of F0 at a center of the cell of interest and the slope.